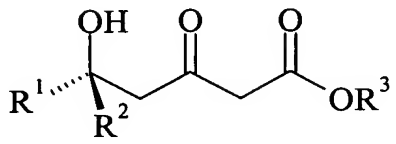
What is claimed is

1. A process for preparing an optically active 5-hydroxy-3-ketoester of the formula **A1** or **A2**

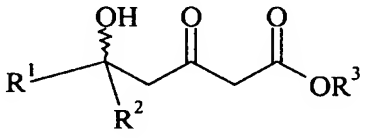


A1 or **A2**

or one of the tautomers thereof,

wherein R^1 and R^2 independently of each other represent hydrogen or a group which is selected from among C_1-C_8-alkyl, C_3-C_8-cycloalkyl, C_6-C_{10}-aryl and C_1-C_8-alkylene-C_6-C_{10}-aryl, optionally with one, two or three substituents, selected from among hydroxy, halogen, C_1-C_4-alkoxy and CF_3, where R^1 and R^2 do not simultaneously have the same meaning, and

R^3 denotes a group selected from among C_1-C_8-alkyl, C_1-C_4-Haloalkyl, C_6-C_{10}-aryl-C_1-C_8-alkylene and trihydrocarbylsilyl, characterised in that a racemic mixture of a 5-hydroxy-3-ketoester of formula **A**



A

wherein R^1, R^2 and R^3 are as hereinbefore defined,

is resolved into the two enantiomeric 5-hydroxy-3-ketoester **A1** and **A2** by preparative high performance liquid chromatography (HPLC) over a chiral carrier material.

2. The process according to claim 1, wherein the two separate enantiomeric 5-hydroxy-3-ketoesters **A1** and **A2** are each obtained in an enantiomer excess of at least 95%.

3. The process according to claim 1, wherein R^1 and R^2 independently of each other are selected from the group consisting of methyl, ethyl, propyl, butyl, phenyl, benzyl, phenylethyl and phenylpropyl, optionally with a substituent selected from the group consisting of hydroxy, fluorine, chlorine, bromine, methoxy, ethoxy and CF_3.

4. The process according to claim 1, wherein R^3 is selected from the group consisting of methyl, ethyl, propyl, butyl and benzyl.

5. The process according to claim 1, wherein R^1 denotes 2-phenylethyl and R^2 denote propyl or R^1 denotes propyl and R^2 denotes 2-phenylethyl.

6. The process according to claim 1, wherein R^3 denotes tert.-butyl or ethyl.

7. The process according to claim 5, wherein R^1 denotes 2-phenylethyl, R^2 denotes propyl and R^3 denotes ethyl or tert.-butyl.

8. The process according to claim 1, wherein chemically modified polysaccharide is used as the chiral carrier material.

9. The process according to claim 8, wherein the chemically modified polysaccharide is a polysaccharide which contains one or more optically active groups chemically bound.

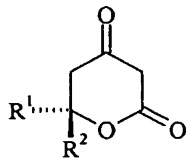
10. The proces according to claim 8, wherein the polysaccharide is selected from the group consisting of dextrin, cyclodextrin, starch, amylose and cellulose.

11. The process according to claim 8, wherein the carrier material is selected from the group consisting of tris(3,5-dimethylphenylcarbamate)-amylose, tris[(S)-α-methylbenzylcarbamate]-amylose, tris(3,5-dimethylphenylcarbamate)-cellulose, tris(4-methylbenzoate)-cellulose, cellulosetriacetate, cellulosetribenzoate, tris(phenylcarbamate)-cellulose, tris(4-chlorophenylcarbamate)-cellulose, cellulosetricinnamate and cellulosetribenzoate.

12. The process according to claim 8, wherein tris(3,5-dimethylphenylcarbamate)-amylose or tris(3,5-dimethylphenylcarbamate)-cellulose is used as the carrier material.

13. The process according to claim 1, wherein the preparative HPLC is used in the form of SMB (Simulated Moving Bed) chromatography.

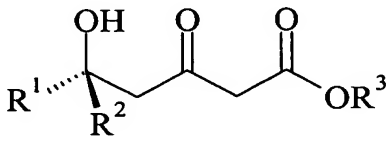
14. A method for preparing an optically active dihydropyrone of formula **B**



B

or one of the tautomers thereof,

wherein R^1 and R^2 independently of each another denote hydrogen or a group selected from among C_1-C_8-alkyl, C_3-C_8-cycloalkyl, C_6-C_{10}-aryl and C_1-C_8-alkylene-C_6-C_{10}-aryl, optionally with one, two or three substituents, selected from among hydroxy, halogen, C_1-C_4-alkoxy and CF_3, wherein R^1 and R^2 do not simultaneously have the same meaning, wherein an optically active 5-hydroxy-3-ketoester of formula **A1** or **A2**



A1 or **A2**

is cyclised according to methods known *per se* to form an optically active dihydropyrone of formula **B**.

15. The method of claim 14 wherein the dihydropyrone of formula **B** is tipranavir.